

Photoelectrics

Retro-reflective

Type PA18CLR30T, AC, PBTP housing

CARLO GAVAZZI



- Range: 3 m
- Modulated infrared light
- Supply voltage: 20 to 250 VAC
- Output: 500 mA SCR
- Make and break switching functions
- LED output indication
- High immunity to ambient light
- Cable and plug versions



Product Description

The PA18CLR.. is a family of inexpensive general purpose Retro-reflective sensors in industrial standard 18 mm cylindrical PBTP housing. They are useful for simple applications where a basic

sensor provides adequate sensing performance. The sensors are simple to use and no adjustment are necessary. The output is a 2-wire NO or NC thyristor (SCR) output.

Ordering Key

PA18CLR30TOM6

Type _____
Housing style _____
Housing size _____
Housing material _____
Housing length _____
Detection principle _____
Sensing distance _____
Output type _____
Output configuration _____
Connection type _____

Type Selection

Housing diameter	Rated operating dist. (S _n)	Ordering no. SCR/Cable Make switching	Ordering no. SCR/Plug Make switching	Ordering no. SCR/Cable Break switching	Ordering no. SCR/Plug Break switching
M18	3 m	PA18CLR30TO	PA18CLR30TOM6	PA18CLR30TC	PA18CLR30TCM6

Note: Plugs and reflectors to be ordered separately

Specifications

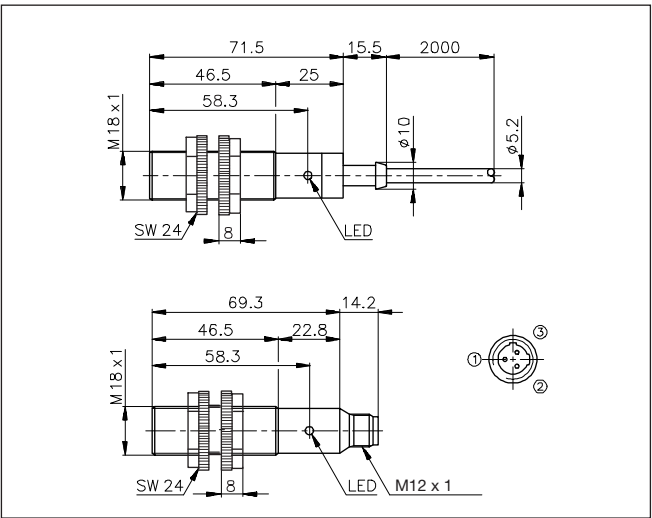
Rated operating dist. (S_n)	Up to 3 m Ref. reflector type ER4, Ø 84 mm	Operating frequency (f)	Max. 20 Hz, light/dark ratio 1:2
Temperature drift	0.4%/K	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 20 ms ≤ 30 ms
Hysteresis (H) (Differential travel)	3 to 20%	Power ON delay (t_v)	Typ. 100 ms
Rated operational volt. (U_B)	20 to 250 VAC, 45 to 65 Hz	Indication function Output ON	Dark (NC) or light (NO) switching LED, yellow
Output current (AC 12, AC 140) Continuous (I _e) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	Environment Overvoltage category Pollution degree Degree of protection	III (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
Min. operational current (I_m)	10 mA	Temperature Operating Storage	-20° to +60°C (-4° to 140°F) -30° to +70°C (-22° to 158°F)
OFF-state current (I_r)	< 5 mA, typ. 2.6 mA	Vibration	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6)
Voltage drop (U_d)	≤ 10 VAC, typ. 7 VAC	Shock	2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
Protection	Transients	Dielectric voltage	1600 V (IEC 60364-4-41)
Transient voltage	1 kV/0.5 J		
Light source	GaAlAs LED, 880 nm		
Light type	Infrared, modulated		
Optical angle	± 2.2°		
Light spot size	150 mm at 2 m		
Ambient light	Max. 10,000 lux		



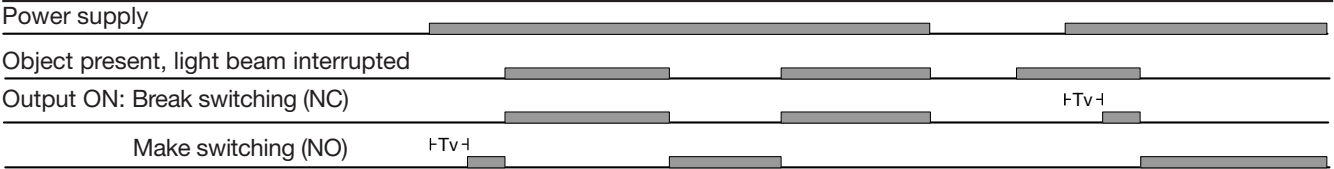
Specifications (cont.)

Housing material	
Body	PBTP grey thermoplastic polyester
Front	Luran®, black
Cable end	Polyester, black
Nuts	Reinforced nylon
Connection	
Cable	Grey, 2 m, 2 x 0.5 mm², oilproof PVC
Plug	M12 x 1
Cables for plug (M6)	CON.6A-.. serie
Weight	
Cable version	105 g
Plug version	22 g
Approvals	
UL, CSA	
CE-marking	
Yes	

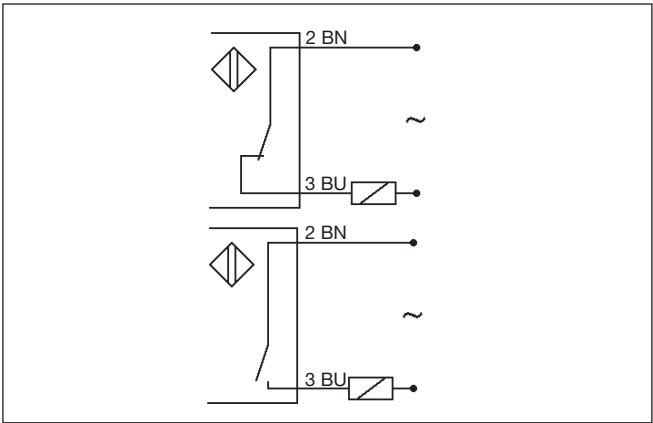
Dimensions



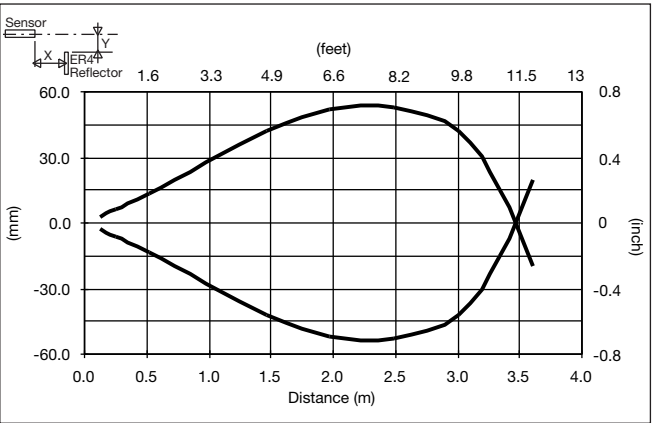
Operation Diagram



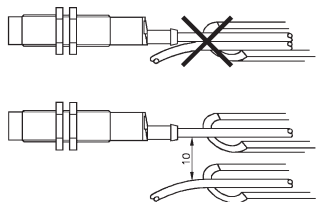
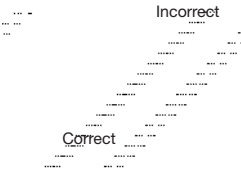
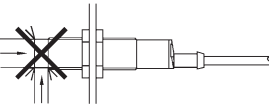
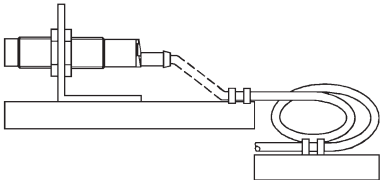
Wiring Diagrams



Detection Diagram



Installation Hints

To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables 	Relief of cable strain  The cable should not be pulled	Protection of the sensing face  A proximity switch should not serve as mechanical stop	Switch mounted on mobile carrier  Any repetitive flexing of the cable should be avoided
---	---	--	--

Delivery Contents

- Photoelectric switch: PA18CLR30T.
- 2 nuts
- **Packaging:** plastic bag

Accessories

- Reflectors: ER series
- Connector type CON.6A-.. serie
- MB18A
- APA18-RAR

For further information refer to "Accessories"